

TWO UNKNOWN *LUTICOLA* TAXA FROM THE MARITIME ANTARCTIC REGION

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Species of the genus *Luticola* Mann are often found in a variety of aerial, subaerial and aquatic habitats in Antarctica. Recent studies on Antarctic non-marine diatoms have shown that the species diversity in this genus in the Antarctic region has been underestimated in the past. In the last few years, a large number of new *Luticola* species, most of them previously lumped together as infra-specific taxa of *Luticola muticopsis*, *L. mutica* and/or *L. cohnii*, were recognized and described from the islands in the Antarctic Peninsula area, and the overall number of *Luticola* species, known from this part of the world increased significantly (see Kopalová et al. 2011, Van de Vijver et al. 2011 and references therein for details).

During an ongoing revision of the limnoterrestrial diatom flora of Livingston Island – the second largest of the South Shetland Islands, and James Ross Island, located in the northwestern Weddell Sea, two *Luticola* taxa that cannot be identified using the currently available literature were observed. The first taxon resembles another recently described species from the Antarctic, *L. vermeulenii*. The second species shows some affinities to the European *L. goeppertiana*-complex. Both taxa are studied using light and scanning electron microscopy and compared with other morphologically similar species from the Antarctic and elsewhere to justify their separation as independent species. Based on the results of a preliminary biogeographical analysis, the two taxa have never been observed outside Maritime Antarctica, suggesting once again a separation between this region, the Antarctic Continent and the sub-Antarctic islands in Southern Indian Ocean, as already observed in previous studies.

References:

Kopalová K., L. Nedbalová, M. de Haan & B. Van de Vijver. 2011. Description of five new species of the diatom genus *Luticola* (Bacillariophyta, Diadesmidaceae) found in lakes of James Ross Island (Maritime Antarctic Region). *Phytotaxa* 27: 44-60.

Van de Vijver B., R. Zidarova & M. de Haan. 2011. Four new *Luticola* taxa (Bacillariophyta) from the South Shetland Islands and James Ross Island (Maritime Antarctic Region). *Nova AuHedwigia* 92: 137-158.